Mumbai University

Question Paper

[CBSGS – 75:25 Pattern]
(October – 2017)

PAPER - I

Internet Technologies

Time: 2 ½ Hours   **Total Marks:** 75

N.B.: **(1)** *All Question are Compulsory.*
    (2) *Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.*
    (3) *Answer To The Same Question Must Be Written Together.*
    (4) *Number To The Right Indicates Marks.*
    (5) *Draw Neat Labeled Diagrams Wherever Necessary.*
    (6) *Use of Non – Programmable Calculator is allowed.*

Q.1   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**
(A)   What are the special addresses used in IPv4?   **(5)**
(B)   How is IPv4 implemented over ATM Networks? Explain.   **(5)**
(C)   Compare IPv4 Protocol and IPv6 Protocol with respect to their Headers.   **(5)**
(D)   How is the address space allocated for IP6 Addresses?   **(5)**

Q.2   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**
(A)   Explain the Distance Vector Algorithm used in Routing Information Protocol.   **(5)**
(B)   Explain the phases for Mobile IP Communication.   **(5)**
(C)   Explain the Error Reporting Messages in ICMP.   **(5)**
(D)   Write a note on ATMARP.   **(5)**

Q.3   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**
(A)   Explain the Server State Transition diagram for TCP.   **(5)**
(B)   Explain the TCP Timers.   **(5)**
(C)   State and explain the UDP Services.   **(5)**
(D)   Explain the UDP Applications with respect to Connection, Error Control with examples.   **(5)**

Q.4   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**
(A)   Explain the DHCP Client Transition diagram.   **(5)**
(B)   Explain Recursive Resolution and Iterative Resolution used in Domain Name Service.   **(5)**
(C)   Explain the Services provided by Stream Control Transmission Protocol.   **(5)**
(D)   How does Stream Control Transmission Protocol manage Flow Control?   **(5)**

Q.5   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**
(A)   Explain the Data Formatting Commands and the Port Defining Commands in FTP.   **(5)**
(B)   <u>Explain the following terms:</u>   **(5)**
    (i) *Dynamic Document*
    (ii) *Static Document*
    (iii) *Hypertext*
    (iv) *Hypermedia*
    (v) *Uniform Resource Locator*
(C)   Write a note on HTTP.   **(5)**
(D)   State and explain the different TFTP Messages.   **(5)**

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Q.6 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

(A) What is Simple Mail Transfer Protocol? Explain the scenario where both the sender and receiver are **(5)**
connected to the web servers via LAN or WAN.

(B) Explain POP3 and IMAP4. **(5)**

(C) Explain the four approaches to streaming stored audio/video. **(5)**

(D) Write a note on Real-Time Transport Control Protocol. **(5)**

Q.7 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

(A) Explain the functions of the user support layers of the OSI Model. **(5)**

(B) Explain the Link State Routing used in Open Shortest Path First Protocol. **(5)**

(C) How does TCP Handle Congestion? **(5)**

(D) Explain the following used in Domain Name Service: **(5)**
> **(i)** *Partially Qualified Domain Name*
> **(ii)** *Label*
> **(iii)** *Zone*
> **(iv)** *Root Server*
> **(v)** *Primary Server*

(E) State and explain the different kinds of messages used in Border Gateway Protocol. **(5)**

(F) Write note on MIME. **(5)**